

SOME COMMENTS ON AMERICAN LESPEDEZAS (LEGUMINOSAE)

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In a previous paper (Clewell 1966a) I had presented evidence that the 11 native American species of *Lespedeza* Leguminosae are capable of hybridizing with each other whenever plants of two or more species occur sympatrically. Furthermore, in sympatric populations of moderate size, it is the rule, rather than the exception, that a few hybrids will be present. Thirty-three hybrid combinations were reported on the basis of examinations of natural populations and herbarium specimens. Nine of these combinations were confirmed by progeny tests and two by comparisons with artificial hybrids.

Among these 33 hybrid combinations, the evidence for one, *L. intermedia* × *virginica*, was listed as very tentative. These species are close morphologically, and no progeny tests were run or artificial hybrids produced to confirm the identity of the few specimens appearing to be this hybrid. On 15 November 1964 R. K. Godfrey and I collected several lespedezas in fruit along the borders of open, upland pine woods in Torreya State Park, Liberty County, in the Florida panhandle. Plants of *L. virginica* (L.) Britt. were common, and a few colonies of *L. intermedia* (S. Wats.) Britt. were observed. Certain plants (Godfrey 65012 & Clewell, in part, FSU) were difficult to identify, although they most closely resembled shade forms of *L. intermedia* seen elsewhere. They did not have the narrower, appressed-pubescent leaflets of *L. virginica*, and they possessed the longer stipules and shorter calyxes of another closely related species, *L. violacea* (L.) Pers. The latter species is rare in the Southeast and has not been reported from Florida. Nonetheless, the region in which we were collecting is well known for disjunct and endemic species.

To establish the identity of these plants a few seeds were removed and planted in a greenhouse in 1966 for a progeny test. Seven plants were grown to maturity, and shoots were collected from them in 1966 and 1967. None of the progeny possessed the elongate keels and other distinguishing characteristics of *L. violacea*. Two of the seven offspring possessed all of the characteristics of "typical" *L. virginica*, one was typically *L. intermedia*, and another fell within the range of variation of *L. intermedia* but tended towards *L. virginica*. The other three offspring were intermediate between *L. virginica* and *L. intermedia*. One of these three had some branches with leaves typical in shape and indu-

ment of *L. virginica*, while other branches bore leaves typical of *L. intermedia*.

This progeny test establishes the identity of the plants at Torreya Park as *L. intermedia* × *virginica* and confirms that this hybrid combination does indeed exist in nature. I noted previously (Clewell 1966b) that offspring from hybrid lespedezas often fell within the gamut of variability of one or the other of the parental species involved. The present hybrid is no exception; four of seven offspring are identifiable as *L. intermedia* or *L. virginica*.

Besides the 33 hybrid combinations already noted (Clewell 1966a), one and perhaps a second can now be recognized. In 1966 I visited the U. S. National Herbarium and examined some lespedezas collected by Wolff in Bell County, Texas. Included were specimens of *L. repens* (L.) Bart., *L. texana* Britt., *L. virginica*, and one which in my opinion is undoubtedly the previously unreported hybrid, *L. texana* × *virginica*. This plant (Wolff 871) is morphologically intermediate between these species. Since *L. texana* and *L. repens* are close morphologically, the possibility arises that this hybrid is *L. repens* × *virginica*. This plant did not resemble the many collections I have made of *L. repens* × *virginica* in the Southeast. The other new hybrid combination, *L. repens* × *texana* (based on Wolff 880), remains tentative because of the morphological similarity of these species. These collections are notable in that plants of *L. texana* rarely grow sympatrically with the other lespedezas.

Since publishing county distribution maps of the American lespedezas (Clewell 1966a), I have examined additional specimens which represent state records or notable range modifications. They are as follows: *Lespedeza angustifolia* (Pursh) Ell.: Philadelphia Co., Pa., Brinton in 1893 (US). *Lespedeza capitata* Michx.: Coos Co., N. H., Pease 29240 (NEBC); Johnson Co., Texas, Palmer 6471 (US). *Lespedeza hirta* (L.) Hornem. subsp. *curtissii* Clewell: Baldwin Co., Ala., Godfrey 65963 (FSU); Polk Co., Fla., McFarlin (FLAS). *Lespedeza procumbens* Michx.: Harris Co., Texas, Hall in 1872 (US). *Lespedeza violacea*: Colbert Co., Ala., Isely 3849 (US); Warren Co., Ky., Burton 397 (US); Hillsborough Co., N. H., Batchelder in 1917 (NEBC); Addison Co., Vt., Grout in 1896 (NEBC). *Lespedeza stuevei* Nutt.: Putnam Co., Fla., Laessle in 1940 (FLAS); Windham Co., Vt., Blanchard 8 (NEBC). *Lespedeza texana* Britt.: Garza Co., Texas, Palmer 250 (US). *Lespedeza angustifolia* × *virginica*; Leon Co., Fla., Clewell 2379 (FSU). I had examined the McFarlin and Laessle collections in 1961 and had misidentified them as *L. hirta* subsp. *hirta* and *L. virginica*, respectively. Unfortunately, on published distribution maps these two taxa are shown to extend further south in Florida (Polk and Putnam Cos., respectively) than extant specimens warrant (Clewell 1966a, Figs. 5, 13).

While rummaging through the specimens of *L. intermedia* at the National Herbarium I discovered a photograph of a specimen in the

British Museum, *Clayton 174*. This collection serves as the type of the name, *L. frutescens* (L.) Britt. Because it is a type, I have been unable to obtain it on loan. There has been some doubt as to the identity of this specimen. If *Clayton 174* is identifiable with plants I have been calling *L. intermedia* (S. Wats.) Britt., then *L. frutescens* becomes the legitimate name of this species on the basis of priority. From the photograph I can say with near certainty that *Clayton 174* belongs to *L. violacea* (L.) Pers., both from its habit and from the presence of an elongate, delicate peduncle. Therefore, the question of the legitimacy of the name, *L. intermedia*, raised previously (Clewell 1966a, p. 381) is resolved in favor of *L. intermedia*.

REFERENCES

- CLEWELL, A. F. 1966a. North American species of *Lespedeza* (Leguminosae), *Rhodora* 68: 359-405.
- . 1966b. Natural history, cytology & isolating mechanisms of the native American lespedezas. Bul. No. 6, Tall Timbers Res. Sta., Tallahassee. 39 pp.